

September 11, 2002 NRC Staff/NEI Public Meeting
Regarding Steam Generator Issues

Resolution Status - Technical Issues Relating to NEI SG GLCP

On September 11, 2002, NRC staff met with NEI and other industry representatives to discuss a number of steam generator issues including issues related to the NEI Steam Generator (SG) Generic License Change Package (GLCP). At the conclusion of the meeting, the staff committed to summarize the resolution status of each of the issues pertaining to the GLCP discussed during the meeting and to include this summary as part of the meeting summary. This enclosure summarizes the resolution status.

Technical Specification Issues

1. SG Program

Issue a: Industry has proposed revising the first sentence of the TS to state that this program provides controls to ensure tube integrity. The staff believes that the sentence should remain unchanged from previous versions of the GLCP. The industry's proposal would create the implication that simply meeting the rest of the administrative technical specification is sufficient to ensure tube integrity, which it is not. The previous versions make it clear it is the licensee's responsibility to establish and implement a program which ensures tube integrity.

Status: Industry has agreed to revise its proposal consistent with previous versions.

Issue b: Industry has proposed adding the following words subsequent to the first two sentences of the administrative technical specification; "The program shall contain the following:" (Note, these words do not appear in industry versions through at least version 7 dated May 10, 2001.) The staff believes these words may create the mis-impression that implementation of condition monitoring, maximum inspection intervals, and tube repair limits are sufficient to ensure the tube integrity performance criteria are being met. Thus, they should be deleted or modified (e.g., In addition, the SG program shall include ...).

Status: This specific issue was not discussed at meeting.

Prognosis for Near Term Resolution: Near term resolution is achievable.

2. Structural Performance Criterion:

Issue: Industry has agreed to include the complete version of this criteria in TS, except for words relating to 1.4 criterion.

Status: Industry and staff agree that appropriate wording needs to be developed clarifying the applicability of the 1.4 criterion to only applied loads (loads leading

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to primary stress) and that it does not apply to sources of displacement controlled stress such as differential thermal loads. Resolution of this issue is subject to resolution of priority guideline issue 1 below.

Action: Industry has the action to develop the appropriate TS wording and submit proposal to staff.

Prognosis for Near Term Resolution: General success path identified. Development of appropriate wording in TS and guidelines believed to be straightforward. Near term resolution is achievable.

3. Definition of "Burst"

Issue: Industry desires not to include definition of "burst" in TS as proposed by staff.

Status: Staff will likely agree to not including definition of burst in TS. Resolution of this issue is subject to resolution of priority guideline issue 2 below.

Prognosis for Near Term Resolution: General success path identified. Development of appropriate wording in guidelines believed to be straightforward. Near term resolution is achievable.

4. Accident Leakage Performance Criteria

Issue: Industry has agreed to include the complete version of this criteria in TS.

Status: Issue is resolved.

4. Operational Leakage Performance Criteria

Issue: Staff has agreed with industry's proposal to reference the LCO requirement.

Status: Issue is resolved.

5. Condition Monitoring

Issue: Industry has agreed to include full wording consistent with previous versions of GLCP.

Status: Issue is resolved.

6. Tube Repair Criteria

Issue: Industry has agreed to words proposed by the staff with two modifications. The first modification involves inclusion of the words "or repaired." The staff believes the general applicability of these words to all technical specifications depends on how the tube repair method issue (technical specification issue 8) is resolved. Thus, this first modification is not part of the tube repair criteria issue, rather it is part of the tube repair

method issue. The staff is in agreement with the second proposed modification regarding replacing the words “plant restart” with “entry into mode 4.”

Status: Issue is resolved.

7. Definition - Tube Repair Criteria

Issue: Staff agrees that definition in TS is unnecessary.

Status: Issue is resolved.

8. Repair Methods

Issue: Staff proposed that acceptable tube repair methods be listed in the technical specifications. Industry disagrees. Industry believes TS should allow repair without specifying acceptable methods since methods would be subject to ASME Code requirements.

Status: Issue not resolved.

Action: Both industry and staff are contemplating how we can write technical specification to give licensees flexibility to implement new repair methods in accordance with Code, while being assured that risk threshold not crossed.

Prognosis for Near Term Resolution: Potential resolutions discussed at meeting, but not fleshed out. Further interaction between staff and industry is needed if we are to get a near term resolution.

9. Definition - Tube Repair Methods

Issue: Staff will likely agree that definition in TS is unnecessary, depending on how issue 8 is resolved.

Action: Staff will evaluate the industry proposal to delete in context of issue 8 resolution.

Prognosis for Near Term Resolution: This issue will be quickly resolved once issue 8 is resolved

10. Maximum Inspection Intervals

Issue a: Staff proposed that maximum inspection intervals be specified consistent with Revision 6 of the SG examination guidelines. Industry proposes that a subset of the guideline restrictions be in technical specifications; i.e., a one cycle or 24 EFPM limit for plants with 600 MA tubing, 48 EFPM for 600 TT tubing, and 72 EFPM for 690 TT tubing.

Status: Issue not resolved.

Prognosis for Near Term Resolution: Unknown. Further interaction between staff and industry is needed if we are to get a near term resolution.

Issue b: Staff proposed that TS specify detailed criteria (degradation activity threshold) beyond which only single cycle inspection intervals would be allowed. Industry opposes detailed criteria.

Status: Industry representative suggested alternative approach that TS could specify that inspection intervals are to be limited to single cycles if active degradation is present. Criteria for what constitutes “active degradation” would not be specified in the TS (but would be in industry guidelines). This issue is not resolved.

Prognosis for Near Term Resolution: Unknown.

Issue c: Staff proposed that damage from loose parts and foreign objects could only be excluded as an active degradation mechanism (i.e., to cross the degradation activity threshold) if the causal loose part or foreign object is identified and removed from the steam generator. Industry guidelines provide that damage from loose parts and foreign objects can always be excluded as active degradation mechanisms.

Status: Issue not resolved.

Prognosis for Near Term Resolution: Unknown

Issue d: Industry has relaxed the proposal it made last year to the staff and ACRS for a 2 fuel cycle inspection interval for SGs with 600 TT tubing and a 3 fuel cycle inspection interval for SGs with 690 TT tubing to 48 EFPM and 72 EFPM inspection intervals, respectively. The staff has proposed both a fuel cycle and EFPM limitation.

Status: Issue not resolved.

Prognosis for Near Term Resolution: Unknown.

Issue e: Need to add clarification to TS that TS 4.0.2 surveillance extension factor of 1.25 is not intended to be applicable to SG surveillance interval specs which would be substantially extended by the GLCP and which are based on fuel cycles or EFPM and which therefore already inherently provide the intended operational flexibility to allow for contingencies such as extended outages.

Priority Guideline Issues (Needing resolution concurrent with submittal of final GLCP. Resolutions may be published in interim/supplemental guidelines pending next formal revision of guidelines.)

1. Structural Performance Criteria:

Issue: Guideline structural criterion needed for displacement controlled loads such as differential thermal loads.

Issue status: Industry and staff are in agreement on this point.

Action: Industry has the action to develop the appropriate criteria. Industry will inform staff of its proposed criterion and its justification.

Prognosis for Near Term Resolution: General success path identified.
Development of appropriate guideline wording believed to be straightforward.
Near term resolution is achievable.

2. Interpretation - Definition of Burst

Issue: Staff and industry are in agreement that guidelines should clarify the threshold between gross versus localized structural failure of the tube wall when dealing with volumetric flaws such as wear. Staff made specific proposal.

Action: Industry has the action to develop appropriate guideline clarification.

Prognosis for Near Term Resolution: General success path identified.
Development of appropriate guideline wording believed to be straightforward.
Near term resolution is achievable.

3. Clarification - Degradation Assessment

Issue: Staff has identified needed clarifications to industry guidelines on degradation assessment. These include clarification of the objectives of degradation assessment and clarification/underscoring the importance of consideration of recent experience at other facilities or study results indicating a need to revisit previous degradation and operational assessments supporting the planned surveillance interval.

Status: Industry will include the suggested clarifications in the integrity assessment guidelines. Staff notes that integrity assessment and examination guidelines address degradation assessment and should contain consistent guidance.

Action: Industry has the action to develop appropriate guideline clarifications.

Prognosis for Near Term Resolution: General success path identified.
Development of appropriate guideline wording believed to be straightforward.
Near term resolution is achievable.